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AF# 2857

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on 12/31/2003

Rhonda Zaffino
Rhonda Zaffino

In Re Application of:

Thomas D. Petite

Serial No.: 09/925,269

Filed: 08/09/2001

Confirmation No.: 5550

Group Art Unit: 2857

Examiner: Mary C. Baran

Docket No.: 081607-1210

For: **Wireless Communication Networks
for Providing Remote Monitoring
of Devices**

The following is a list of documents enclosed:

Return Postcard
Fee Transmittal
Credit Card Authorization Form in the amount of \$165.00 to cover filing fee
Appeal Brief (in triplicate)

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Small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)**165.00**

Complete If Known

Application Number **09/925,269**
Filing Date **8/9/2001**
First Named Inventor **Thomas D. Petite**
Examiner Name **Mary C. Baran**
Group / Art Unit **2857**
Attorney Docket No. **081607-1210**

METHOD OF PAYMENT (check all that apply)

☐ Check ☒ Credit Card ☐ Money Order ☐ Other ☐ None

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Deposit Account Number

20-0778

Deposit Account Name

Thomas, Kayden, Horstemeyer Risley, L.L.P.

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FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid
1001	770	2001	385	Utility Filing Fee	
1002	340	2002	170	Design Filing Fee	
1003	530	2003	265	Plant Filing Fee	
1004	770	2004	385	Reissue Filing Fee	
1005	160	2005	80	Provisional Filing Fee	
SUBTOTAL (1)					(\$) 0

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra Claims	Fee From Below	Fee Paid
Total Claims	- 20** =	9.00	
Independent Claims	- 3** =	43.00	
Multiple Dependent		145.00	

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	**Reissue independent claims over original patent
1205	18	2205	9	**Reissue claims in excess of 20 and over original patent
SUBTOTAL (2)				(\$) 0

**or number previously paid, if greater; For Reissues, see above

FEES CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge-late filing fee or oath	
1052	50	2052	25	Surcharge-late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	165.00
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive-unavoidable	
1453	1,330	2453	655	Petition to revive-unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee for provisional application	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	770	2810	385	For each add. invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited exam. of a design application	
Other fee (specify)					
SUBTOTAL (3)					(\$) 165.00

*Reduced by Basic Filing Fee Paid

SUBMITTED BY

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Signature

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Date **12/31/2003**

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ORIGINAL

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:)	Confirmation No.: 5550
)	
Thomas D. Petite)	Group Art Unit: 2857
)	
Serial No.: 09/925,269)	Examiner: Mary C. Baran
)	
Filed: 8/9/01)	Docket No. 081607-1210
)	
For: WIRELESS COMMUNICATION)	
NETWORKS FOR PROVIDING)	
REMOTE MONITORING OF)	
DEVICES)	

APPEAL BRIEF UNDER 37 C.F.R. §1.192

Mail Stop: Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This Appeal Brief under 37 C.F.R. §1.192 is submitted in triplicate in support of the Notice of Appeal filed October 31, 2003 responding to the Final Office Action mailed July 31, 2003.

It is not believed that extensions of time are required, beyond those, which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor are hereby authorized to be charged to Deposit Account No 20-0778.

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Rhonda Jeffers

I. REAL PARTY-IN-INTEREST

The real party-in-interest is the assignee, StatSignal Systems, Inc. The assignment was recorded on August 9, 2001, on reel 012069, at frame 0064.

II. RELATED APPEALS AND INTERFERENCES

There are no known related appeals or interferences that will affect or be affected by a decision in this appeal.

III. STATUS OF CLAIMS

Claims 1 - 29 stand finally rejected. No claims have been allowed. The final rejection of claims 1- 29 is appealed.

IV. STATUS OF AMENDMENTS

The present application was filed with claims 1 – 26. In the First Office Action, the Examiner rejected claims 1 – 4, 7 – 16, 19 – 23, and 26 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,907,491 to Canada *et al.* (“the ‘491 patent”) in view of U.S. Patent No. 6,141,437 to Shaughnessy *et al.* (“the ‘347 patent”). The Examiner also rejected dependent claims 5, 6, 17, 18, 24, and 25 under 35 U.S.C. §103(a) as allegedly being unpatentable over the ‘491 patent in view of the ‘347 patent and further in view U.S. Patent No. 6,288,641 to Casais (“the ‘641 patent”). In response to the First Office Action, Appellant submitted a “First Response and Amendment” and argued that the rejections of claims 1 – 26 were improper because the Examiner failed to establish a prima facie case of obviousness because (1) there is no suggestion or motivation to combine the applied references and (2) the combinations of the applied references do not disclose, teach, or

suggest all of the limitations/features/elements of the claims. Appellant also added new claims 27 – 29.

In the Second Office Action, the Examiner made a final rejection of claims 1 – 29. Appellant submitted a “Second Response and Amendment to Office Action” and again argued that the rejections were improper. The Examiner issued an Advisory Action. In response, Appellant timely filed a “Notice of Appeal From the Examiner to the Board of Patent Appeals and Interferences” on October 31, 2003.

The claims in the attached Appendix reflect the present state of pending claims 1 - 29. The final rejection of claims 1 - 29 is appealed.

V. SUMMARY OF THE INVENTION

Appellant’s independent claim 1 recites a wireless communication network adapted for use in an automated monitoring system for monitoring and controlling a plurality of remote devices via a host computer connected to a wide area network. The wireless communication network comprises:

a plurality of wireless transceivers (135) having unique identifiers, each of the plurality of wireless transceivers (135) configured to receive a sensor data signal from one of the plurality of remote devices (130, 140) and transmit an original data message using a predefined wireless communication protocol, the original data message comprising the corresponding unique identifier and sensor data signal, and further configured to receive the original data message transmitted by one of the other wireless transceivers (135) and transmit a repeated data message using the predefined communication protocol, the repeated data message including the sensor data signal and the corresponding unique identifier; and

a site controller (150) in communication with at least one of the plurality of wireless transceivers (135), the site controller (150) configured to receive the original data messages and the repeated data messages, identify the remote device (130, 140) associated with the corresponding sensor data signal, and provide information related to the sensor data signal to the wide area network (120) for delivery to the host computer (110, 160, 155).

Appellant's independent claim 27 recites a method for enabling customers to monitor remote devices via a wide area network (WAN). The method comprises:

establishing a wireless communication network (100) that enables each of a plurality of customers to monitor at least one remote device (130, 140) via a wide area network (120), the wireless communication network (100) comprising:

a plurality of wireless transceivers (135) each integrated with one of the plurality of remote devices (130, 140) and having a unique identifier and configured to receive a sensor data signal from the remote device (130, 140) and transmit an original data message using a predefined wireless communication protocol, the original data message comprising the corresponding unique identifier for the originating wireless transceiver (135), each wireless transceiver (135) further configured to receive the original data message transmitted by one of the other wireless transceivers (135) and transmit a repeated data messaging using the predefined communication protocol, the repeated data message including the original sensor data signal and the corresponding unique identifiers for the originating wireless transceiver (135) and the repeating wireless transceiver (135); and

a site controller (150) in communication with at least one of the plurality of wireless transceivers (135), the site controller (150) configured to receive the original data messages and the repeated data messages, identify the remote device (130, 140) associated with the corresponding sensor data signal, and provide information related to the sensor data signal to a WAN (120) for delivery to a host computer (110, 155, 160); and

providing an organization access to the wireless communication network (100).

VI. ISSUES

The following issue needs to be decided as part of this appeal:

Issue: Are rejected claims 1 – 29 patentable under 35 U.S.C. §103(a) over U.S. Patent No. 5,907,491 to Canada *et al.* (“the ‘491 patent”) in view of U.S. Patent No. 6,141,437 to Shaughnessy *et al.* (“the ‘347 patent”).

VII. GROUPING OF CLAIMS

For this appeal, Appellant groups the pending claims 1 – 29 into the following claim groups:

- (1) Claims 1 – 7 (Group A);
- (2) Claims 8 – 12 (Group B);
- (3) Claims 13 and 19 (Group C);
- (4) Claims 20 and 26 (Group D); and
- (5) Claims 27 – 29 (Group E).

VIII. THE ARGUMENT

Appellant respectfully requests that the Board overturn the rejection of claims 1 – 29 for at least the reasons discussed below.

A. Discussion of Group A: Claims 1 – 7 are Patentable Over U.S. Patent No. 5,907,491 to Canada *et al.* in view of U.S. Patent No. 6,141,437 to Shaughnessy *et al.*

The Examiner rejected claims 1 – 7 under 35 U.S.C. §102(b) as allegedly being unpatentable over U.S. Patent No. 5,907,491 to Canada *et al.* (“the ‘491 patent”) in view of U.S. Patent No. 6,141,437 to Shaughnessy *et al.* (“the ‘347 patent”). Claims 1 – 7 stand or fall as a group (Group A) with respect to the rejection over the ‘491 patent and the ‘347

patent. Appellant submits that the rejection of claims 1 – 7 should be overturned for at least the following reasons:

- (1) the Examiner has not established a prima facie case of obviousness because the Examiner has failed to establish the proper motivation, suggestion, or other teaching that would lead a person of ordinary skill in the art to combine the '491 patent and the '347 patent in such a manner to render obvious claims 1 – 7; and
- (2) the Examiner has not established a prima facie case of obviousness because any combination of the '491 patent and the '347 patent fails to disclose, teach, or suggest each and every limitation/feature/element of claims 1 – 7.

1. No Suggestion or Motivation

The rejection of claims 1 – 7 under 35 U.S.C. §103(a) should be withdrawn because the Examiner has failed to establish a prima facie case of obviousness. In order to establish a prima facie case of obviousness by combining references, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill, to modify the primary reference (the '491 patent) in the manner allegedly taught by the secondary reference (the '347 patent). *See e.g.*, MPEP §§2142, 2143; *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir 1991); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Appellant respectfully submits that there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the

art, to modify the alleged teaching of the '491 patent with the alleged teaching of the '347 patent such as to render obvious claims 1 - 7.

In fact, Appellant respectfully submits that the '347 patent is improper "nonanalogous art" that may not be relied upon to support a prima facie case of obviousness. In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must be either in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. MPEP §2141.01(a); *See, In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992); *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992); *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993).

The '491 patent relates to localized systems for monitoring physical characteristics, such as vibration or temperature, of industrial machines within a manufacturing plant and transmitting sensed data to a central command station located within the manufacturing plant for monitoring. Col. 2, ll. 23 - 39; col. 1, l. 17 - col. 2, l. 19. The '491 patent states that the disclosed invention solved the cost and maintenance problems associated with other wired-type localized machine monitoring systems. It should be noted that the systems disclosed in the '491 patent were very simple communication systems in which the central command station polled the machine monitors for data as needed. The '491 patent, therefore, was mainly related to adding a simple wireless capability to existing systems for monitoring complex industrial machines by a command station within the manufacturing plant to improve cost, installation, and maintenance.

The '347 patent, however, relates to global mobile wireless telecommunications systems such as Global System for Mobile Communications (GSM) and Advanced Mobile Phone Service (AMPS) – *not* localized wireless monitoring systems. More specifically, the

'347 patent involves a distributed approach to mobility processing. The '347 patent explains that mobility processing relates to various processing functions within global wireless telecommunications systems for managing the movement of subscribers (*e.g.*, cellphone users) as they move between sites (*e.g.*, cells supported by a cell tower).

Unlike the '491 patent (which involves solving maintenance, cost, and installation problems in a local and very simple polling-type monitoring system), the '347 patent involves solving the very complex problems associated with managing the movement of mobile subscribers between coverage areas in complicated global telecommunications networks. Clearly, one of ordinary skill in the art of local polling-type monitoring systems for manufacturing plants would not look for cost reduction solutions related to maintenance and installation in the complex field of multicast addressing schemes in mobile telecommunications systems. In fact, Appellant respectfully submits that such solutions are not disclosed at all in the '347 patent. Therefore, Appellant respectfully asserts that the '347 patent is improper "nonanalogous art" that may not be relied upon to support a rejection under §103. Accordingly, Appellant respectfully requests that the rejection be withdrawn and claims 1 - 7 be allowed.

Even though Appellant believes the §103 rejection is improper because the '347 patent is unavailable "nonanalogous art," Appellant further submits that the Examiner fails to establish a proper motivation or suggestion to modify the alleged teaching of the '491 patent with the alleged teaching of the '347 patent such as to render obvious claims 1 – 7.

Specifically, the Examiner argues that the '491 patent discloses all of the elements of independent claim 1 except for a wide area network and a predefined communication protocol, which the Examiner alleges are disclosed in the '347 patent. The Examiner further argues that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the '491 patent to include the alleged teachings of the '347

patent (wide area network and predefined communication protocol) because “connecting the system to a WAN and transmitting using a predefined protocol allows the skilled artisan to distribute processing which will increase scalability (see Shaughnessy *et al.*, column 2 lines 45 – 49).”

It is well-established law that, in order to properly combine select elements from differing prior art sources, there must be some teaching or suggestion *within the prior art* to make the combination specifically claimed by the Appellant’s invention. *W. L. Gore & Associates, Inc. v. Garlock Thomas, Inc.*, 721 F.2d 1540, 1551 (Fed. Cir. 1983). More significantly,

“The consistent criteria for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this [invention] should be carried out and would have a reasonable likelihood of success, viewed in light of the prior art. ...” ***Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure...*** In determining whether such a suggestion can fairly be gleaned from the prior art, the full field of the invention must be considered; for the person of ordinary skill in the art is charged with knowledge of the entire body of technological literature, including that which might lead away from the claimed invention.”

(Emphasis added) *In re Dow Chemical Company*, 837 F.2d 469, 473 (Fed. Cir. 1988).

It has often been noted that, “[h]umans must work with old elements, most if not all of which will normally be found somewhere in an examination of the prior art.” *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1549, 220 U.S.P.Q. 193 (Fed. Cir. 1983). Furthermore, that features, even distinguishing features, are “disclosed” in the prior art is alone insufficient. As above indicated, it is common to find elements or features somewhere in the prior art. Moreover, most if not all elements perform their ordained and expected function. The test is whether the claimed invention as a whole, in light of all the teachings of the references in

their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made. *Id.*

In this regard, Appellant notes that there must not only be a suggestion to combine the functional or operational aspects of the combined references, but that the Federal Circuit also requires the prior art to suggest **both** the combination of elements **and** the structure resulting from the combination. *Stiftung v. Renishaw PLC*, 945 Fed.2d 1173 (Fed. Cir. 1991). Therefore, in order to sustain an obviousness rejection based upon a combination of any two or more prior art references, the prior art must properly suggest the desirability of combining the particular elements.

Appellant respectfully submits that the purported motivation or suggestion provided by the Examiner is a classic example of impermissible hindsight reasoning based solely on Appellant's disclosure. In fact, Appellant submits that the purported motivation ("to distribute processing which will increase scalability) quoted from the '347 patent is entirely inapplicable to the localized systems disclosed in the '491 patent for monitoring industrial machines within a manufacturing plant. In the '347 patent, the objective of distributing processing and increasing scalability is achieved by including a connectionless packet network 201 which supports multicast addressing between existing sites 203 – 208. WAN 230, LANs 231 – 232, and the corresponding wireless communication protocol function to facilitate communication between the various sites 203 – 208 in the telecommunications system 200. As mentioned above, the connectionless packet network 201 and the corresponding mappings in sites 203 – 208 provide a distributed architecture to improve mobility management (*i.e.*, monitoring the movement of subscribers as they move between sites in the telecommunications system).

Appellant submits, however, that the '347 patent does not suggest the desirability of including the connectionless packet network 201 in a localized system for monitoring

industrial machines in a manufacturing plant as disclosed in the '491 patent. In the '491 patent, a means for communicating between the existing components (command station 6 and machine monitors 4) is already provided by wireless repeaters 8. Appellant notes that an additional communication means, such as connectionless packet network 201, is not necessary.

Furthermore, Appellant submits that the '491 patent teaches away from using a WAN and corresponding wireless communication protocol. As mentioned above, the local system disclosed in the '491 patent is used to transmit physical characteristics of industrial machines from monitors 4 (inside a manufacturing plant) to command station 8 (also inside manufacturing plant) via repeaters 8. In other words, the system requires *local* transmission and not transmission over a *wide* area network. Therefore, Appellant respectfully submits that the Examiner establishes no motivation or suggestion to combine the '347 patent and the '491 patent such as to render obvious independent claim 1.

Furthermore, because independent claim 1 is believed to be allowable over the prior art of record, dependent claims 2 - 7 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that they contain all features and elements of the corresponding independent claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Appellant respectfully asserts that a prima facie case of obviousness has not been established and requests that the rejection of claims 1 - 7 be overturned.

2. **Combination of References Fails to Teach Each Limitation/Feature/Element of Claims 1 - 7**

Even assuming for the sake of argument that there is some proper suggestion or motivation to modify or combine the '491 patent and the '347 patent as the Examiner

suggests, the combination of these references fails to disclose, teach, or suggest each and every element of independent claim 1. MPEP §2143.03.

The wireless communication network of independent claim 1 is designed for “*monitoring and controlling a plurality of remote devices* via a host computer connected to a wide area network.” Unlike the wireless communication network of independent claim 1, the localized systems taught in the ‘491 patent merely *monitor* physical characteristics, such as vibration or temperature, of industrial machines within a manufacturing plant. The ‘491 patent does not disclose, teach, or suggest the limitation of *controlling* the remote devices. Rather, the system merely responds to a polling request from the command station 6, senses the physical characteristic of the machine, and transmits the data to the command station 6.

The Examiner insists that the ‘491 patent teaches the feature of controlling the remote devices. As discussed throughout the Detailed Description of the present application (see FIG. 1), the wireless transceivers 135 are associated with sensors/actuators 130. The wireless communication network of independent claim 1 enables the actuators 130 to be controlled (*i.e.*, actuated). Appellant respectfully submits that the ‘491 patent does not teach, disclose, or suggest controlling the remote devices. Furthermore, the cellular networks taught in the ‘347 patent clearly do not disclose, teach, or suggest *controlling* the mobile phones.

The wireless communication network of independent claim 1 *monitors and controls* the remote devices, which is not disclosed, taught, or suggested by the ‘491 patent and the ‘347 patent. Accordingly, and for at least this additional reason, Appellant respectfully submits that independent claim 1 patently defines over the ‘491 and ‘347 patents and, therefore, the rejection should be overturned. Furthermore, because independent claim 1 is believed to be allowable over the prior art of record, dependent claims 2 - 7 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that they contain all features and elements of the corresponding independent claim. See, *e.g.*, *In re Fine*, 837

F.2d 1071 (Fed. Cir. 1988). Accordingly, Appellant respectfully asserts that a prima facie case of obviousness has not been established and requests that the rejection of claims 1 – 7 be overturned and the claims be allowed.

Claims 1 – 7 recite further limitations/features/elements that are not disclosed, taught, or suggested by the '491 patent and the '347 patent. The wireless communication network of independent claim 1 comprises “a plurality of transceivers having unique identifiers... *further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message* using the predefined communication protocol.” Unlike the wireless communication network of independent claim 1, the localized systems taught in the '491 patent contain machine monitors 4, inherently including a transmitter, that are merely capable of transmitting the original data message (col. 4, 41-50), but are not capable of transmitting a repeated data message. As shown in FIG. 1 of the present application, sensor/actuator 130, 140 is integrated with a transceiver 135 which is *configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message*.

Looking to FIG. 1 of the '491 patent, the Examiner apparently associates the wireless transceivers of claims 1 – 7 with the machine monitors 4 of the '491 patent. As shown, the machine monitors 4a-4l are designed to relay data messages with either command station 6 or repeater 8a-8d, but not with other machine monitors. Only the repeaters 8a-8d of the '491 patent are designed to transmit a repeated data message. Notably, because repeaters 8a-8d are not associated with an individual machine monitor 4, the repeaters do not transmit a unique identifier. Furthermore, in the '491 patent, the transceivers associated with machine monitors 4a-4l merely transmit and receive to repeaters 8a-8d -- they do not transmit to other transceivers associated with the machine monitors. Thus, '491 patent does not disclose, teach, or suggest “a plurality of wireless transceivers having unique identifiers ... *further*

configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message.”

Furthermore, the cellular networks taught in the ‘347 patent clearly do not disclose, teach, or suggest “a plurality of wireless transceivers having unique identifiers ... *further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message.”*

The wireless communication network of independent claim 1 comprises a plurality of transceivers (each associated with a remote device being monitored and controlled (e.g., sensor/actuator 130, 140). Each wireless transceiver is configured to *transmit a repeated data message*. In other words, each wireless transceiver associated with a remote device may receive and repeat data messages from other wireless transceivers associated with other remote devices. In this manner, the wireless communication system need not include as many repeaters because each transceiver associated with a remote device is configured to repeat data messages from other transceivers.

The Examiner insists that the ‘491 patent teaches wireless transceivers associated with the remote device (i.e., machine monitors 4a-4l), in which the wireless transceivers are configured to repeat data messages from other wireless transceivers in the system. Appellant respectfully submits that the Examiner’s characterization of the ‘491 patent is incorrect. Appellant carefully reviewed the portions of the ‘491 patent cited by the Examiner (as well as the remainder of the patent document). Appellant respectfully submits that the ‘491 patent merely discloses a repeater. The repeaters in the ‘491 patent function as a standalone repeater designed to extend the range of the existing transceivers associated with the machine monitors. Appellant is not claiming that the ‘491 patent does not teach a repeater. In this regard, Appellant maintains that the Examiner has maintained the improper rejection without considering all of the claimed limitations/features/elements.

Appellant submits that the '491 patent does not teach, disclose, or suggest the limitation/feature/element of the wireless transceivers associated with the remote devices being configured to repeat data messages from wireless transceivers associated with other remote devices. As stated above, the integration of the repeat function within the wireless transceivers associated with the remote devices extends the communication range without the need for standalone repeaters. Despite the fact that the '491 patent does teach a standalone repeater, Appellant respectfully submits that the '491 patent does not disclose, teach, or suggest the relevant limitation/feature/element at issue -- the wireless transceivers associated with the remote device being configured to repeat data messages from wireless transceivers associated with other remote devices. For at least this additional reason, Appellant respectfully asserts that claims 1 – 7 patentably define over the '491 patent. Accordingly, Appellant respectfully requests that the rejection of claims 1 – 7 be overturned and the claims be allowed.

B. Discussion of Group B: Claims 8 – 12 are Patentable Over U.S. Patent No. 5,907,491 to Canada *et al.* in view of U.S. Patent No. 6,141,437 to Shaughnessy *et al.*

The Examiner rejected claims 8 – 12 under 35 U.S.C. §102(b) as allegedly being unpatentable over U.S. Patent No. 5,907,491 to Canada *et al.* (“the ‘491 patent”) in view of U.S. Patent No. 6,141,437 to Shaughnessy *et al.* (“the ‘347 patent”). Claims 8 – 12 stand or fall as a group (Group B) with respect to the rejection over the ‘491 patent and the ‘347 patent. Appellant submits that the rejection of claims 8 – 12 should be overturned for at least the following reasons:

- (1) the Examiner has not established a prima facie case of obviousness because the Examiner has failed to establish the proper motivation, suggestion, or other teaching that would lead a person of ordinary skill

in the art to combine the '491 patent and the '347 patent in such a manner to render obvious claims 8 – 12; and

- (2) the Examiner has not established a prima facie case of obviousness because any combination of the '491 patent and the '347 patent fails to disclose, teach, or suggest each and every limitation/feature/element of claims 8 – 12.

1. No Suggestion or Motivation

The rejection of claims 8 – 12 under 35 U.S.C. §103(a) should be withdrawn because the Examiner has failed to establish a prima facie case of obviousness. In order to establish a prima facie case of obviousness by combining references, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill, to modify the primary reference (the '491 patent) in the manner allegedly taught by the secondary reference (the '347 patent). *See e.g.*, MPEP §§2142, 2143; *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir 1991); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Appellant respectfully submits that there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the alleged teaching of the '491 patent with the alleged teaching of the '347 patent such as to render obvious claims 8 - 12.

In fact, Appellant respectfully submits that the '347 patent is improper “nonanalogous art” that may not be relied upon to support a prima facie case of obviousness. In order to rely on a reference as a basis for rejection of an applicant’s invention, the reference must be either in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular

problem with which the inventor was concerned. MPEP §2141.01(a); *See, In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992); *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992); *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993).

The '491 patent relates to localized systems for monitoring physical characteristics, such as vibration or temperature, of industrial machines within a manufacturing plant and transmitting sensed data to a central command station located within the manufacturing plant for monitoring. Col. 2, ll. 23 – 39; col. 1, l. 17 – col. 2, l. 19. The '491 patent states that the disclosed invention solved the cost and maintenance problems associated with other wired-type localized machine monitoring systems. It should be noted that the systems disclosed in the '491 patent were very simple communication systems in which the central command station polled the machine monitors for data as needed. The '491 patent, therefore, was mainly related to adding a simple wireless capability to existing systems for monitoring complex industrial machines by a command station within the manufacturing plant to improve cost, installation, and maintenance.

The '347 patent, however, relates to global mobile wireless telecommunications systems such as Global System for Mobile Communications (GSM) and Advanced Mobile Phone Service (AMPS) – *not* localized wireless monitoring systems. More specifically, the '347 patent involves a distributed approach to mobility processing. The '347 patent explains that mobility processing relates to various processing functions within global wireless telecommunications systems for managing the movement of subscribers (*e.g.*, cellphone users) as they move between sites (*e.g.*, cells supported by a cell tower).

Unlike the '491 patent (which involves solving maintenance, cost, and installation problems in a local and very simple polling-type monitoring system), the '347 patent involves

solving the very complex problems associated with managing the movement of mobile subscribers between coverage areas in complicated global telecommunications networks. Clearly, one of ordinary skill in the art of local polling-type monitoring systems for manufacturing plants would not look for cost reduction solutions related to maintenance and installation in the complex field of multicast addressing schemes in mobile telecommunications systems. In fact, Appellant respectfully submits that such solutions are not disclosed at all in the '347 patent. Therefore, Appellant respectfully asserts that the '347 patent is improper "nonanalogous art" that may not be relied upon to support a rejection under §103. Accordingly, Appellant respectfully requests that the rejection be withdrawn and claims 8 - 12 be allowed.

Even though Appellant believes the §103 rejection is improper because the '347 patent is unavailable "nonanalogous art," Appellant further submits that the Examiner fails to establish a proper motivation or suggestion to modify the alleged teaching of the '491 patent with the alleged teaching of the '347 patent such as to render obvious claims 8 – 12.

Specifically, the Examiner argues that the '491 patent discloses all of the elements of independent claim 8 except for a wide area network and a predefined communication protocol, which the Examiner alleges are disclosed in the '347 patent. The Examiner further argues that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the '491 patent to include the alleged teachings of the '347 patent (wide area network and predefined communication protocol) because "connecting the system to a WAN and transmitting using a predefined protocol allows the skilled artisan to distribute processing which will increase scalability (see Shaughnessy *et al.*, column 2 lines 45 – 49)."

It is well-established law that, in order to properly combine select elements from differing prior art sources, there must be some teaching or suggestion *within the prior art* to

make the combination specifically claimed by the Appellant's invention. *W. L. Gore & Associates, Inc. v. Garlock Thomas, Inc.*, 721 F.2d 1540, 1551 (Fed. Cir. 1983). More significantly,

"The consistent criteria for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this [invention] should be carried out and would have a reasonable likelihood of success, viewed in light of the prior art. ..." ***Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure...*** In determining whether such a suggestion can fairly be gleaned from the prior art, the full field of the invention must be considered; for the person of ordinary skill in the art is charged with knowledge of the entire body of technological literature, including that which might lead away from the claimed invention."

(Emphasis added) *In re Dow Chemical Company*, 837 F.2d 469, 473 (Fed. Cir. 1988).

It has often been noted that, "[h]umans must work with old elements, most if not all of which will normally be found somewhere in an examination of the prior art." *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1549, 220 U.S.P.Q. 193 (Fed. Cir. 1983). Furthermore, that features, even distinguishing features, are "disclosed" in the prior art is alone insufficient. As above indicated, it is common to find elements or features somewhere in the prior art. Moreover, most if not all elements perform their ordained and expected function. The test is whether the claimed invention as a whole, in light of all the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made. *Id.*

In this regard, Appellant notes that there must not only be a suggestion to combine the functional or operational aspects of the combined references, but that the Federal Circuit also requires the prior art to suggest ***both*** the combination of elements ***and*** the structure resulting from the combination. *Stiftung v. Renishaw PLC*, 945 Fed.2d 1173 (Fed. Cir. 1991).

Therefore, in order to sustain an obviousness rejection based upon a combination of any two or more prior art references, the prior art must properly suggest the desirability of combining the particular elements.

Appellant respectfully submits that the purported motivation or suggestion provided by the Examiner is a classic example of impermissible hindsight reasoning based solely on Appellant's disclosure. In fact, Appellant submits that the purported motivation ("to distribute processing which will increase scalability) quoted from the '347 patent is entirely inapplicable to the localized systems disclosed in the '491 patent for monitoring industrial machines within a manufacturing plant. In the '347 patent, the objective of distributing processing and increasing scalability is achieved by including a connectionless packet network 201 which supports multicast addressing between existing sites 203 – 208. WAN 230, LANs 231 – 232, and the corresponding wireless communication protocol function to facilitate communication between the various sites 203 – 208 in the telecommunications system 200. As mentioned above, the connectionless packet network 201 and the corresponding mappings in sites 203 – 208 provide a distributed architecture to improve mobility management (*i.e.*, monitoring the movement of subscribers as they move between sites in the telecommunications system).

Appellant submits, however, that the '347 patent does not suggest the desirability of including the connectionless packet network 201 in a localized system for monitoring industrial machines in a manufacturing plant as disclosed in the '491 patent. In the '491 patent, a means for communicating between the existing components (command station 6 and machine monitors 4) is already provided by wireless repeaters 8. Appellant notes that an additional communication means, such as connectionless packet network 201, is not necessary.

Furthermore, Appellant submits that the '491 patent teaches away from using a WAN and corresponding wireless communication protocol. As mentioned above, the local system disclosed in the '491 patent is used to transmit physical characteristics of industrial machines from monitors 4 (inside a manufacturing plant) to command station 8 (also inside manufacturing plant) via repeaters 8. In other words, the system requires *local* transmission and not transmission over a *wide* area network. Therefore, Appellant respectfully submits that the Examiner establishes no motivation or suggestion to combine the '347 patent and the '491 patent such as to render obvious independent claim 8.

Furthermore, because independent claim 8 is believed to be allowable over the prior art of record, dependent claims 9 - 12 (which depend from independent claim 8) are allowable as a matter of law for at least the reason that they contain all features and elements of the corresponding independent claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Appellant respectfully asserts that a prima facie case of obviousness has not been established and requests that the rejection of claims 8 – 12 be overturned.

2. **Combination of References Fails to Teach Each Limitation/Feature/Element of Claims 8 - 12**

Even assuming for the sake of argument that there is some proper suggestion or motivation to modify or combine the '491 patent and the '347 patent as the Examiner suggests, the combination of these references fails to disclose, teach, or suggest each and every element of independent claim 8. MPEP §2143.03.

The wireless communication network of independent claim 8 is designed for “*monitoring and controlling a plurality of remote devices* via a host computer connected to a wide area network.” Unlike the wireless communication network of independent claim 8, the localized systems taught in the '491 patent merely *monitor* physical characteristics, such

as vibration or temperature, of industrial machines within a manufacturing plant. The '491 patent does not disclose, teach, or suggest the limitation of *controlling* the remote devices. Rather, the system merely responds to a polling request from the command station 6, senses the physical characteristic of the machine, and transmits the data to the command station 6.

The Examiner insists that the '491 patent teaches the feature of controlling the remote devices. As discussed throughout the Detailed Description of the present application (see FIG. 1), the wireless transceivers 135 are associated with sensors/actuators 130. The wireless communication network of independent claim 8 enables the actuators 130 to be controlled (*i.e.*, actuated). Appellant respectfully submits that the '491 patent does not teach, disclose, or suggest controlling the remote devices. Furthermore, the cellular networks taught in the '347 patent clearly do not disclose, teach, or suggest *controlling* the mobile phones.

The wireless communication network of independent claim 8 *monitors and controls* the remote devices, which is not disclosed, taught, or suggested by the '491 patent and the '347 patent. Accordingly, and for at least this additional reason, Appellant respectfully submits that independent claim 8 patentably defines over the '491 and '347 patents and, therefore, the rejection should be overturned. Furthermore, because independent claim 8 is believed to be allowable over the prior art of record, dependent claims 9 - 12 (which depend from independent claim 8) are allowable as a matter of law for at least the reason that they contain all features and elements of the corresponding independent claim. See, *e.g.*, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Appellant respectfully asserts that a *prima facie* case of obviousness has not been established and requests that the rejection of claims 8 - 12 be overturned and the claims be allowed.

Claims 8 - 12 recite further limitations/features/elements that are not disclosed, taught, or suggested by the '491 patent and the '347 patent. The wireless communication network of independent claim 8 comprises "a plurality of transceivers having unique

identifiers... *further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message* using the predefined communication protocol.” Unlike the wireless communication network of independent claim 8, the localized systems taught in the ‘491 patent contain machine monitors 4, inherently including a transmitter, that are merely capable of transmitting the original data message (col. 4, 41-50), but are not capable of transmitting a repeated data message. As shown in FIG. 1 of the present application, sensor/actuator 130, 140 is integrated with a transceiver 135 which is *configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message.*

Looking to FIG. 1 of the ‘491 patent, the Examiner apparently associates the wireless transceivers of claims 8 – 12 with the machine monitors 4 of the ‘491 patent. As shown, the machine monitors 4a-4l are designed to relay data messages with either command station 6 or repeater 8a-8d, but not with other machine monitors. Only the repeaters 8a-8d of the ‘491 patent are designed to transmit a repeated data message. Notably, because repeaters 8a-8d are not associated with an individual machine monitor 4, the repeaters do not transmit a unique identifier. Furthermore, in the ‘491 patent, the transceivers associated with machine monitors 4a-4l merely transmit and receive to repeaters 8a-8d -- they do not transmit to other transceivers associated with the machine monitors. Thus, ‘491 patent does not disclose, teach, or suggest “a plurality of wireless transceivers having unique identifiers ... *further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message.*”

Furthermore, the cellular networks taught in the ‘347 patent clearly do not disclose, teach, or suggest “a plurality of wireless transceivers having unique identifiers ... *further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message.*”

The wireless communication network of independent claim 8 comprises a plurality of transceivers (each associated with a remote device being monitored and controlled (e.g., sensor/actuator 130, 140). Each wireless transceiver is configured to *transmit a repeated data message*. In other words, each wireless transceiver associated with a remote device may receive and repeat data messages from other wireless transceivers associated with other remote devices. In this manner, the wireless communication system need not include as many repeaters because each transceiver associated with a remote device is configured to repeat data messages from other transceivers.

The Examiner insists that the '491 patent teaches wireless transceivers associated with the remote device (i.e., machine monitors 4a-4l), in which the wireless transceivers are configured to repeat data messages from other wireless transceivers in the system. Appellant respectfully submits that the Examiner's characterization of the '491 patent is incorrect. Appellant carefully reviewed the portions of the '491 patent cited by the Examiner (as well as the remainder of the patent document). Appellant respectfully submits that the '491 patent merely discloses a repeater. The repeaters in the '491 patent function as a standalone repeater designed to extend the range of the existing transceivers associated with the machine monitors. Appellant is not claiming that the '491 patent does not teach a repeater. In this regard, Appellant maintains that the Examiner has maintained the improper rejection without considering all of the claimed limitations/features/elements.

Appellant submits that the '491 patent does not teach, disclose, or suggest the limitation/feature/element of the wireless transceivers associated with the remote devices being configured to repeat data messages from wireless transceivers associated with other remote devices. As stated above, the integration of the repeat function within the wireless transceivers associated with the remote devices extends the communication range without the need for standalone repeaters. Despite the fact that the '491 patent does teach a standalone

repeater, Appellant respectfully submits that the '491 patent does not disclose, teach, or suggest the relevant limitation/feature/element at issue -- the wireless transceivers associated with the remote device being configured to repeat data messages from wireless transceivers associated with other remote devices. For at least this additional reason, Appellant respectfully asserts that claims 8 – 12 patentably define over the '491 patent. Accordingly, Appellant respectfully requests that the rejection of claims 8 – 12 be overturned and the claims be allowed.

C. Discussion of Group C: Claims 13 – 19 are Patentable Over U.S. Patent No. 5,907,491 to Canada *et al.* in view of U.S. Patent No. 6,141,437 to Shaughnessy *et al.*

The Examiner rejected claims 13 – 19 under 35 U.S.C. §102(b) as allegedly being unpatentable over U.S. Patent No. 5,907,491 to Canada *et al.* (“the ‘491 patent”) in view of U.S. Patent No. 6,141,437 to Shaughnessy *et al.* (“the ‘347 patent”). Claims 13– 19 stand or fall as a group (Group C) with respect to the rejection over the ‘491 patent and the ‘347 patent. Appellant submits that the rejection of claims 13 – 19 should be overturned for at least the following reasons:

- (1) the Examiner has not established a prima facie case of obviousness because the Examiner has failed to establish the proper motivation, suggestion, or other teaching that would lead a person of ordinary skill in the art to combine the ‘491 patent and the ‘347 patent in such a manner to render obvious claims 13 – 19; and
- (2) the Examiner has not established a prima facie case of obviousness because any combination of the ‘491 patent and the ‘347 patent fails to disclose, teach, or suggest each and every limitation/feature/element of claims 13 – 19.

1. **No Suggestion or Motivation**

The rejection of claims 13 – 19 under 35 U.S.C. §103(a) should be withdrawn because the Examiner has failed to establish a prima facie case of obviousness. In order to establish a prima facie case of obviousness by combining references, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill, to modify the primary reference (the '491 patent) in the manner allegedly taught by the secondary reference (the '347 patent). *See e.g.*, MPEP §§2142, 2143; *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir 1991); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Appellant respectfully submits that there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the alleged teaching of the '491 patent with the alleged teaching of the '347 patent such as to render obvious claims 13 - 19.

In fact, Appellant respectfully submits that the '347 patent is improper "nonanalogous art" that may not be relied upon to support a prima facie case of obviousness. In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must be either in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. MPEP §2141.01(a); *See, In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992); *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992); *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993).

The '491 patent relates to localized systems for monitoring physical characteristics, such as vibration or temperature, of industrial machines within a manufacturing plant and transmitting sensed data to a central command station located within the manufacturing plant for monitoring. Col. 2, ll. 23 – 39; col. 1, l. 17 – col. 2, l. 19. The '491 patent states that the disclosed invention solved the cost and maintenance problems associated with other wired-type localized machine monitoring systems. It should be noted that the systems disclosed in the '491 patent were very simple communication systems in which the central command station polled the machine monitors for data as needed. The '491 patent, therefore, was mainly related to adding a simple wireless capability to existing systems for monitoring complex industrial machines by a command station within the manufacturing plant to improve cost, installation, and maintenance.

The '347 patent, however, relates to global mobile wireless telecommunications systems such as Global System for Mobile Communications (GSM) and Advanced Mobile Phone Service (AMPS) – *not* localized wireless monitoring systems. More specifically, the '347 patent involves a distributed approach to mobility processing. The '347 patent explains that mobility processing relates to various processing functions within global wireless telecommunications systems for managing the movement of subscribers (*e.g.*, cellphone users) as they move between sites (*e.g.*, cells supported by a cell tower).

Unlike the '491 patent (which involves solving maintenance, cost, and installation problems in a local and very simple polling-type monitoring system), the '347 patent involves solving the very complex problems associated with managing the movement of mobile subscribers between coverage areas in complicated global telecommunications networks. Clearly, one of ordinary skill in the art of local polling-type monitoring systems for manufacturing plants would not look for cost reduction solutions related to maintenance and installation in the complex field of multicast addressing schemes in mobile

telecommunications systems. In fact, Appellant respectfully submits that such solutions are not disclosed at all in the '347 patent. Therefore, Appellant respectfully asserts that the '347 patent is improper "nonanalogous art" that may not be relied upon to support a rejection under §103. Accordingly, Appellant respectfully requests that the rejection be withdrawn and claims 13 - 19 be allowed.

Even though Appellant believes the §103 rejection is improper because the '347 patent is unavailable "nonanalogous art," Appellant further submits that the Examiner fails to establish a proper motivation or suggestion to modify the alleged teaching of the '491 patent with the alleged teaching of the '347 patent such as to render obvious claims 13 – 19.

Specifically, the Examiner argues that the '491 patent discloses all of the elements of independent claim 13 except for a wide area network and a predefined communication protocol, which the Examiner alleges are disclosed in the '347 patent. The Examiner further argues that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the '491 patent to include the alleged teachings of the '347 patent (wide area network and predefined communication protocol) because "connecting the system to a WAN and transmitting using a predefined protocol allows the skilled artisan to distribute processing which will increase scalability (see Shaughnessy *et al.*, column 2 lines 45 – 49)."

It is well-established law that, in order to properly combine select elements from differing prior art sources, there must be some teaching or suggestion *within the prior art* to make the combination specifically claimed by the Appellant's invention. *W. L. Gore & Associates, Inc. v. Garlock Thomas, Inc.*, 721 F.2d 1540, 1551 (Fed. Cir. 1983). More significantly,

"The consistent criteria for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this [invention] should be carried out and

would have a reasonable likelihood of success, viewed in light of the prior art. ..." ***Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure...*** In determining whether such a suggestion can fairly be gleaned from the prior art, the full field of the invention must be considered; for the person of ordinary skill in the art is charged with knowledge of the entire body of technological literature, including that which might lead away from the claimed invention."

(Emphasis added) *In re Dow Chemical Company*, 837 F.2d 469, 473 (Fed. Cir. 1988).

It has often been noted that, "[h]umans must work with old elements, most if not all of which will normally be found somewhere in an examination of the prior art." *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1549, 220 U.S.P.Q. 193 (Fed. Cir. 1983). Furthermore, that features, even distinguishing features, are "disclosed" in the prior art is alone insufficient. As above indicated, it is common to find elements or features somewhere in the prior art. Moreover, most if not all elements perform their ordained and expected function. The test is whether the claimed invention as a whole, in light of all the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made. *Id.*

In this regard, Appellant notes that there must not only be a suggestion to combine the functional or operational aspects of the combined references, but that the Federal Circuit also requires the prior art to suggest ***both*** the combination of elements ***and*** the structure resulting from the combination. *Stiftung v. Renishaw PLC*, 945 Fed.2d 1173 (Fed. Cir. 1991). Therefore, in order to sustain an obviousness rejection based upon a combination of any two or more prior art references, the prior art must properly suggest the desirability of combining the particular elements.

Appellant respectfully submits that the purported motivation or suggestion provided by the Examiner is a classic example of impermissible hindsight reasoning based solely on

Appellant's disclosure. In fact, Appellant submits that the purported motivation ("to distribute processing which will increase scalability) quoted from the '347 patent is entirely inapplicable to the localized systems disclosed in the '491 patent for monitoring industrial machines within a manufacturing plant. In the '347 patent, the objective of distributing processing and increasing scalability is achieved by including a connectionless packet network 201 which supports multicast addressing between existing sites 203 – 208. WAN 230, LANs 231 – 232, and the corresponding wireless communication protocol function to facilitate communication between the various sites 203 – 208 in the telecommunications system 200. As mentioned above, the connectionless packet network 201 and the corresponding mappings in sites 203 – 208 provide a distributed architecture to improve mobility management (*i.e.*, monitoring the movement of subscribers as they move between sites in the telecommunications system).

Appellant submits, however, that the '347 patent does not suggest the desirability of including the connectionless packet network 201 in a localized system for monitoring industrial machines in a manufacturing plant as disclosed in the '491 patent. In the '491 patent, a means for communicating between the existing components (command station 6 and machine monitors 4) is already provided by wireless repeaters 8. Appellant notes that an additional communication means, such as connectionless packet network 201, is not necessary.

Furthermore, Appellant submits that the '491 patent teaches away from using a WAN and corresponding wireless communication protocol. As mentioned above, the local system disclosed in the '491 patent is used to transmit physical characteristics of industrial machines from monitors 4 (inside a manufacturing plant) to command station 8 (also inside manufacturing plant) via repeaters 8. In other words, the system requires *local* transmission and not transmission over a *wide* area network. Therefore, Appellant respectfully submits

that the Examiner establishes no motivation or suggestion to combine the '347 patent and the '491 patent such as to render obvious independent claim 13.

Furthermore, because independent claim 13 is believed to be allowable over the prior art of record, dependent claims 14 - 19 (which depend from independent claim 13) are allowable as a matter of law for at least the reason that they contain all features and elements of the corresponding independent claim. See, *e.g.*, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Appellant respectfully asserts that a prima facie case of obviousness has not been established and requests that the rejection of claims 13 – 19 be overturned.

2. **Combination of References Fails to Teach Each Limitation/Feature/Element of Claims 13 - 19**

Even assuming for the sake of argument that there is some proper suggestion or motivation to modify or combine the '491 patent and the '347 patent as the Examiner suggests, the combination of these references fails to disclose, teach, or suggest each and every element of independent claim 13. MPEP §2143.03.

The wireless communication network of independent claim 13 is designed for ***“monitoring and controlling a plurality of remote devices*** via a host computer connected to a wide area network.” Unlike the wireless communication network of independent claim 1, the localized systems taught in the '491 patent merely ***monitor*** physical characteristics, such as vibration or temperature, of industrial machines within a manufacturing plant. The '491 patent does not disclose, teach, or suggest the limitation of ***controlling*** the remote devices. Rather, the system merely responds to a polling request from the command station 6, senses the physical characteristic of the machine, and transmits the data to the command station 6.

The Examiner insists that the '491 patent teaches the feature of controlling the remote devices. As discussed throughout the Detailed Description of the present application (see

FIG. 1), the wireless transceivers 135 are associated with sensors/actuators 130. The wireless communication network of independent claim 13 enables the actuators 130 to be controlled (*i.e.*, actuated). Appellant respectfully submits that the '491 patent does not teach, disclose, or suggest controlling the remote devices. Furthermore, the cellular networks taught in the '347 patent clearly do not disclose, teach, or suggest **controlling** the mobile phones.

The wireless communication network of independent claim 13 ***monitors and controls*** the remote devices, which is not disclosed, taught, or suggested by the '491 patent and the '347 patent. Accordingly, and for at least this additional reason, Appellant respectfully submits that independent claim 13 patentably defines over the '491 and '347 patents and, therefore, the rejection should be overturned. Furthermore, because independent claim 13 is believed to be allowable over the prior art of record, dependent claims 14 - 19 (which depend from independent claim 13) are allowable as a matter of law for at least the reason that they contain all features and elements of the corresponding independent claim. See, *e.g.*, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Appellant respectfully asserts that a *prima facie* case of obviousness has not been established and requests that the rejection of claims 13 - 19 be overturned and the claims be allowed.

Claims 13 - 19 recite further limitations/features/elements that are not disclosed, taught, or suggested by the '491 patent and the '347 patent. The wireless communication network of independent claim 13 comprises "a plurality of transceivers having unique identifiers... ***further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message*** using the predefined communication protocol." Unlike the wireless communication network of independent claim 1, the localized systems taught in the '491 patent contain machine monitors 4, inherently including a transmitter, that are merely capable of transmitting the original data message (col. 4, 41-50), but are not capable of transmitting a repeated data message. As shown in FIG. 1 of

the present application, sensor/actuator 130, 140 is integrated with a transceiver 135 which is ***configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message.***

Looking to FIG. 1 of the '491 patent, the Examiner apparently associates the wireless transceivers of claims 13 – 19 with the machine monitors 4 of the '491 patent. As shown, the machine monitors 4a-4l are designed to relay data messages with either command station 6 or repeater 8a-8d, but not with other machine monitors. Only the repeaters 8a-8d of the '491 patent are designed to transmit a repeated data message. Notably, because repeaters 8a-8d are not associated with an individual machine monitor 4, the repeaters do not transmit a unique identifier. Furthermore, in the '491 patent, the transceivers associated with machine monitors 4a-4l merely transmit and receive to repeaters 8a-8d -- they do not transmit to other transceivers associated with the machine monitors. Thus, '491 patent does not disclose, teach, or suggest "a plurality of wireless transceivers having unique identifiers ... ***further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message.***"

Furthermore, the cellular networks taught in the '347 patent clearly do not disclose, teach, or suggest "a plurality of wireless transceivers having unique identifiers ... ***further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message.***"

The wireless communication network of independent claim 13 comprises a plurality of transceivers (each associated with a remote device being monitored and controlled (e.g., sensor/actuator 130, 140). Each wireless transceiver is configured to ***transmit a repeated data message.*** In other words, each wireless transceiver associated with a remote device may receive and repeat data messages from other wireless transceivers associated with other remote devices. In this manner, the wireless communication system need not include as many

repeaters because each transceiver associated with a remote device is configured to repeat data messages from other transceivers.

The Examiner insists that the '491 patent teaches wireless transceivers associated with the remote device (*i.e.*, machine monitors 4a-4l), in which the wireless transceivers are configured to repeat data messages from other wireless transceivers in the system. Appellant respectfully submits that the Examiner's characterization of the '491 patent is incorrect. Appellant carefully reviewed the portions of the '491 patent cited by the Examiner (as well as the remainder of the patent document). Appellant respectfully submits that the '491 patent merely discloses a repeater. The repeaters in the '491 patent function as a standalone repeater designed to extend the range of the existing transceivers associated with the machine monitors. Appellant is not claiming that the '491 patent does not teach a repeater. In this regard, Appellant maintains that the Examiner has maintained the improper rejection without considering all of the claimed limitations/features/elements.

Appellant submits that the '491 patent does not teach, disclose, or suggest the limitation/feature/element of the wireless transceivers associated with the remote devices being configured to repeat data messages from wireless transceivers associated with other remote devices. As stated above, the integration of the repeat function within the wireless transceivers associated with the remote devices extends the communication range without the need for standalone repeaters. Despite the fact that the '491 patent does teach a standalone repeater, Appellant respectfully submits that the '491 patent does not disclose, teach, or suggest the relevant limitation/feature/element at issue -- the wireless transceivers associated with the remote device being configured to repeat data messages from wireless transceivers associated with other remote devices. For at least this additional reason, Appellant respectfully asserts that claims 13 – 19 patentably define over the '491 patent. Accordingly,

Appellant respectfully requests that the rejection of claims 13 – 19 be overturned and the claims be allowed.

D. Discussion of Group D: Claims 20 – 26 are Patentable Over U.S. Patent No. 5,907,491 to Canada *et al.* in view of U.S. Patent No. 6,141,437 to Shaughnessy *et al.*

The Examiner rejected claims 20 – 26 under 35 U.S.C. §102(b) as allegedly being unpatentable over U.S. Patent No. 5,907,491 to Canada *et al.* (“the ‘491 patent”) in view of U.S. Patent No. 6,141,437 to Shaughnessy *et al.* (“the ‘347 patent”). Claims 20 – 26 stand or fall as a group (Group D) with respect to the rejection over the ‘491 patent and the ‘347 patent. Appellant submits that the rejection of claims 20 – 26 should be overturned for at least the following reasons:

- (1) the Examiner has not established a prima facie case of obviousness because the Examiner has failed to establish the proper motivation, suggestion, or other teaching that would lead a person of ordinary skill in the art to combine the ‘491 patent and the ‘347 patent in such a manner to render obvious claims 20 – 26; and
- (2) the Examiner has not established a prima facie case of obviousness because any combination of the ‘491 patent and the ‘347 patent fails to disclose, teach, or suggest each and every limitation/feature/element of claims 20 – 26.

1. No Suggestion or Motivation

The rejection of claims 20 – 26 under 35 U.S.C. §103(a) should be withdrawn because the Examiner has failed to establish a prima facie case of obviousness. In order to establish a prima facie case of obviousness by combining references, there must be some suggestion or

motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill, to modify the primary reference (the '491 patent) in the manner allegedly taught by the secondary reference (the '347 patent). *See e.g.*, MPEP §§2142, 2143; *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir 1991); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Appellant respectfully submits that there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the alleged teaching of the '491 patent with the alleged teaching of the '347 patent such as to render obvious claims 20 – 26.

In fact, Appellant respectfully submits that the '347 patent is improper “nonanalogous art” that may not be relied upon to support a prima facie case of obviousness. In order to rely on a reference as a basis for rejection of an applicant’s invention, the reference must be either in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. MPEP §2141.01(a); *See, In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992); *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992); *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993).

The '491 patent relates to localized systems for monitoring physical characteristics, such as vibration or temperature, of industrial machines within a manufacturing plant and transmitting sensed data to a central command station located within the manufacturing plant for monitoring. Col. 2, ll. 23 – 39; col. 1, l. 17 – col. 2, l. 19. The '491 patent states that the disclosed invention solved the cost and maintenance problems associated with other wired-type localized machine monitoring systems. It should be noted that the systems disclosed in

the '491 patent were very simple communication systems in which the central command station polled the machine monitors for data as needed. The '491 patent, therefore, was mainly related to adding a simple wireless capability to existing systems for monitoring complex industrial machines by a command station within the manufacturing plant to improve cost, installation, and maintenance.

The '347 patent, however, relates to global mobile wireless telecommunications systems such as Global System for Mobile Communications (GSM) and Advanced Mobile Phone Service (AMPS) – *not* localized wireless monitoring systems. More specifically, the '347 patent involves a distributed approach to mobility processing. The '347 patent explains that mobility processing relates to various processing functions within global wireless telecommunications systems for managing the movement of subscribers (*e.g.*, cellphone users) as they move between sites (*e.g.*, cells supported by a cell tower).

Unlike the '491 patent (which involves solving maintenance, cost, and installation problems in a local and very simple polling-type monitoring system), the '347 patent involves solving the very complex problems associated with managing the movement of mobile subscribers between coverage areas in complicated global telecommunications networks. Clearly, one of ordinary skill in the art of local polling-type monitoring systems for manufacturing plants would not look for cost reduction solutions related to maintenance and installation in the complex field of multicast addressing schemes in mobile telecommunications systems. In fact, Appellant respectfully submits that such solutions are not disclosed at all in the '347 patent. Therefore, Appellant respectfully asserts that the '347 patent is improper "nonanalogous art" that may not be relied upon to support a rejection under §103. Accordingly, Appellant respectfully requests that the rejection be withdrawn and claims 20 – 26 be allowed.

Even though Appellant believes the §103 rejection is improper because the '347 patent is unavailable "nonanalogous art," Appellant further submits that the Examiner fails to establish a proper motivation or suggestion to modify the alleged teaching of the '491 patent with the alleged teaching of the '347 patent such as to render obvious claims 20 – 26.

Specifically, the Examiner argues that the '491 patent discloses all of the elements of independent claim 20 except for a wide area network and a predefined communication protocol, which the Examiner alleges are disclosed in the '347 patent. The Examiner further argues that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the '491 patent to include the alleged teachings of the '347 patent (wide area network and predefined communication protocol) because "connecting the system to a WAN and transmitting using a predefined protocol allows the skilled artisan to distribute processing which will increase scalability (see Shaughnessy *et al.*, column 2 lines 45 – 49)."

It is well-established law that, in order to properly combine select elements from differing prior art sources, there must be some teaching or suggestion *within the prior art* to make the combination specifically claimed by the Appellant's invention. *W. L. Gore & Associates, Inc. v. Garlock Thomas, Inc.*, 721 F.2d 1540, 1551 (Fed. Cir. 1983). More significantly,

"The consistent criteria for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this [invention] should be carried out and would have a reasonable likelihood of success, viewed in light of the prior art. ..." ***Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure...*** In determining whether such a suggestion can fairly be gleaned from the prior art, the full field of the invention must be considered; for the person of ordinary skill in the art is charged with knowledge of the entire body of technological literature, including that which might lead away from the claimed invention."

(Emphasis added) *In re Dow Chemical Company*, 837 F.2d 469, 473 (Fed. Cir. 1988).

It has often been noted that, "[h]umans must work with old elements, most if not all of which will normally be found somewhere in an examination of the prior art." *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1549, 220 U.S.P.Q. 193 (Fed. Cir. 1983). Furthermore, that features, even distinguishing features, are "disclosed" in the prior art is alone insufficient. As above indicated, it is common to find elements or features somewhere in the prior art. Moreover, most if not all elements perform their ordained and expected function. The test is whether the claimed invention as a whole, in light of all the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made. *Id.*

In this regard, Appellant notes that there must not only be a suggestion to combine the functional or operational aspects of the combined references, but that the Federal Circuit also requires the prior art to suggest **both** the combination of elements **and** the structure resulting from the combination. *Stiftung v. Renishaw PLC*, 945 Fed.2d 1173 (Fed. Cir. 1991). Therefore, in order to sustain an obviousness rejection based upon a combination of any two or more prior art references, the prior art must properly suggest the desirability of combining the particular elements.

Appellant respectfully submits that the purported motivation or suggestion provided by the Examiner is a classic example of impermissible hindsight reasoning based solely on Appellant's disclosure. In fact, Appellant submits that the purported motivation ("to distribute processing which will increase scalability) quoted from the '347 patent is entirely inapplicable to the localized systems disclosed in the '491 patent for monitoring industrial machines within a manufacturing plant. In the '347 patent, the objective of distributing processing and increasing scalability is achieved by including a connectionless packet

network 201 which supports multicast addressing between existing sites 203 – 208. WAN 230, LANs 231 – 232, and the corresponding wireless communication protocol function to facilitate communication between the various sites 203 – 208 in the telecommunications system 200. As mentioned above, the connectionless packet network 201 and the corresponding mappings in sites 203 – 208 provide a distributed architecture to improve mobility management (*i.e.*, monitoring the movement of subscribers as they move between sites in the telecommunications system).

Appellant submits, however, that the '347 patent does not suggest the desirability of including the connectionless packet network 201 in a localized system for monitoring industrial machines in a manufacturing plant as disclosed in the '491 patent. In the '491 patent, a means for communicating between the existing components (command station 6 and machine monitors 4) is already provided by wireless repeaters 8. Appellant notes that an additional communication means, such as connectionless packet network 201, is not necessary.

Furthermore, Appellant submits that the '491 patent teaches away from using a WAN and corresponding wireless communication protocol. As mentioned above, the local system disclosed in the '491 patent is used to transmit physical characteristics of industrial machines from monitors 4 (inside a manufacturing plant) to command station 8 (also inside manufacturing plant) via repeaters 8. In other words, the system requires *local* transmission and not transmission over a *wide* area network. Therefore, Appellant respectfully submits that the Examiner establishes no motivation or suggestion to combine the '347 patent and the '491 patent such as to render obvious independent claim 1.

Furthermore, because independent claim 20 is believed to be allowable over the prior art of record, dependent claims 21 - 26 (which depend from independent claim 20) are allowable as a matter of law for at least the reason that they contain all features and elements

of the corresponding independent claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Appellant respectfully asserts that a prima facie case of obviousness has not been established and requests that the rejection of claims 20 – 26 be overturned.

2. **Combination of References Fails to Teach Each Limitation/Feature/Element of Claims 20 – 26**

Even assuming for the sake of argument that there is some proper suggestion or motivation to modify or combine the ‘491 patent and the ‘347 patent as the Examiner suggests, the combination of these references fails to disclose, teach, or suggest each and every element of independent claim 20. MPEP §2143.03.

The wireless communication network of independent claim 20 is designed for “*monitoring and controlling a plurality of remote devices* via a host computer connected to a wide area network.” Unlike the wireless communication network of independent claim 20, the localized systems taught in the ‘491 patent merely *monitor* physical characteristics, such as vibration or temperature, of industrial machines within a manufacturing plant. The ‘491 patent does not disclose, teach, or suggest the limitation of *controlling* the remote devices. Rather, the system merely responds to a polling request from the command station 6, senses the physical characteristic of the machine, and transmits the data to the command station 6.

The Examiner insists that the ‘491 patent teaches the feature of controlling the remote devices. As discussed throughout the Detailed Description of the present application (see FIG. 1), the wireless transceivers 135 are associated with sensors/actuators 130. The wireless communication network of independent claim 20 enables the actuators 130 to be controlled (*i.e.*, actuated). Appellant respectfully submits that the ‘491 patent does not teach, disclose, or suggest controlling the remote devices. Furthermore, the cellular networks taught in the ‘347 patent clearly do not disclose, teach, or suggest *controlling* the mobile phones.

The wireless communication network of independent claim 20 ***monitors and controls*** the remote devices, which is not disclosed, taught, or suggested by the '491 patent and the '347 patent. Accordingly, and for at least this additional reason, Appellant respectfully submits that independent claim 20 patentably defines over the '491 and '347 patents and, therefore, the rejection should be overturned. Furthermore, because independent claim 20 is believed to be allowable over the prior art of record, dependent claims 21 - 26 (which depend from independent claim 20) are allowable as a matter of law for at least the reason that they contain all features and elements of the corresponding independent claim. See, *e.g.*, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Appellant respectfully asserts that a prima facie case of obviousness has not been established and requests that the rejection of claims 20 – 26 be overturned and the claims be allowed.

Claims 20 – 26 recite further limitations/features/elements that are not disclosed, taught, or suggested by the '491 patent and the '347 patent. The wireless communication network of independent claim 20 comprises “a plurality of transceivers having unique identifiers... ***further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message*** using the predefined communication protocol.” Unlike the wireless communication network of independent claim 20, the localized systems taught in the '491 patent contain machine monitors 4, inherently including a transmitter, that are merely capable of transmitting the original data message (col. 4, 41-50), but are not capable of transmitting a repeated data message. As shown in FIG. 1 of the present application, sensor/actuator 130, 140 is integrated with a transceiver 135 which is ***configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message.***

Looking to FIG. 1 of the '491 patent, the Examiner apparently associates the wireless transceivers of claims 20 – 26 with the machine monitors 4 of the '491 patent. As shown, the

machine monitors 4a-4l are designed to relay data messages with either command station 6 or repeater 8a-8d, but not with other machine monitors. Only the repeaters 8a-8d of the '491 patent are designed to transmit a repeated data message. Notably, because repeaters 8a-8d are not associated with an individual machine monitor 4, the repeaters do not transmit a unique identifier. Furthermore, in the '491 patent, the transceivers associated with machine monitors 4a-4l merely transmit and receive to repeaters 8a-8d -- they do not transmit to other transceivers associated with the machine monitors. Thus, '491 patent does not disclose, teach, or suggest "a plurality of wireless transceivers having unique identifiers ... *further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message.*"

Furthermore, the cellular networks taught in the '347 patent clearly do not disclose, teach, or suggest "a plurality of wireless transceivers having unique identifiers ... *further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message.*"

The wireless communication network of independent claim 20 comprises a plurality of transceivers (each associated with a remote device being monitored and controlled (e.g., sensor/actuator 130, 140)). Each wireless transceiver is configured to *transmit a repeated data message*. In other words, each wireless transceiver associated with a remote device may receive and repeat data messages from other wireless transceivers associated with other remote devices. In this manner, the wireless communication system need not include as many repeaters because each transceiver associated with a remote device is configured to repeat data messages from other transceivers.

The Examiner insists that the '491 patent teaches wireless transceivers associated with the remote device (i.e., machine monitors 4a-4l), in which the wireless transceivers are configured to repeat data messages from other wireless transceivers in the system. Appellant

respectfully submits that the Examiner's characterization of the '491 patent is incorrect.

Appellant carefully reviewed the portions of the '491 patent cited by the Examiner (as well as the remainder of the patent document). Appellant respectfully submits that the '491 patent merely discloses a repeater. The repeaters in the '491 patent function as a standalone repeater designed to extend the range of the existing transceivers associated with the machine monitors. Appellant is not claiming that the '491 patent does not teach a repeater. In this regard, Appellant maintains that the Examiner has maintained the improper rejection without considering all of the claimed limitations/features/elements.

Appellant submits that the '491 patent does not teach, disclose, or suggest the limitation/feature/element of the wireless transceivers associated with the remote devices being configured to repeat data messages from wireless transceivers associated with other remote devices. As stated above, the integration of the repeat function within the wireless transceivers associated with the remote devices extends the communication range without the need for standalone repeaters. Despite the fact that the '491 patent does teach a standalone repeater, Appellant respectfully submits that the '491 patent does not disclose, teach, or suggest the relevant limitation/feature/element at issue -- the wireless transceivers associated with the remote device being configured to repeat data messages from wireless transceivers associated with other remote devices. For at least this additional reason, Appellant respectfully asserts that claims 20 – 26 patentably define over the '491 patent. Accordingly, Appellant respectfully requests that the rejection of claims 20 – 26 be overturned and the claims be allowed.

E. Discussion of Group E: Claims 27 – 29 are Patentable Over U.S. Patent No. 5,907,491 to Canada *et al.* in view of U.S. Patent No. 6,141,437 to Shaughnessy *et al.*

The Examiner rejected claims 27 – 29 under 35 U.S.C. §102(b) as allegedly being unpatentable over U.S. Patent No. 5,907,491 to Canada *et al.* (“the ‘491 patent”) in view of U.S. Patent No. 6,141,437 to Shaughnessy *et al.* (“the ‘347 patent”). Claims 27 – 29 stand or fall as a group (Group E) with respect to the rejection over the ‘491 patent and the ‘347 patent. Appellant submits that the rejection of claims 27 – 29 should be overturned for at least the following reasons:

- (1) the Examiner has not established a prima facie case of obviousness because the Examiner has failed to establish the proper motivation, suggestion, or other teaching that would lead a person of ordinary skill in the art to combine the ‘491 patent and the ‘347 patent in such a manner to render obvious claims 27 – 29; and
- (2) the Examiner has not established a prima facie case of obviousness because any combination of the ‘491 patent and the ‘347 patent fails to disclose, teach, or suggest each and every limitation/feature/element of claims 27 – 29.

1. No Suggestion or Motivation

The rejection of claims 27 – 29 under 35 U.S.C. §103(a) should be withdrawn because the Examiner has failed to establish a prima facie case of obviousness. In order to establish a prima facie case of obviousness by combining references, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill, to modify the primary reference (the ‘491 patent) in the manner allegedly taught by the secondary reference (the ‘347 patent). *See e.g.*, MPEP §§2142, 2143; *In re*

Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Appellant respectfully submits that there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the alleged teaching of the '491 patent with the alleged teaching of the '347 patent such as to render obvious claims 27 – 29.

In fact, Appellant respectfully submits that the '347 patent is improper “nonanalogous art” that may not be relied upon to support a prima facie case of obviousness. In order to rely on a reference as a basis for rejection of an applicant’s invention, the reference must be either in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. MPEP §2141.01(a); *See, In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992); *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992); *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993).

The '491 patent relates to localized systems for monitoring physical characteristics, such as vibration or temperature, of industrial machines within a manufacturing plant and transmitting sensed data to a central command station located within the manufacturing plant for monitoring. Col. 2, ll. 23 – 39; col. 1, l. 17 – col. 2, l. 19. The '491 patent states that the disclosed invention solved the cost and maintenance problems associated with other wired-type localized machine monitoring systems. It should be noted that the systems disclosed in the '491 patent were very simple communication systems in which the central command station polled the machine monitors for data as needed. The '491 patent, therefore, was mainly related to adding a simple wireless capability to existing systems for monitoring

complex industrial machines by a command station within the manufacturing plant to improve cost, installation, and maintenance.

The '347 patent, however, relates to global mobile wireless telecommunications systems such as Global System for Mobile Communications (GSM) and Advanced Mobile Phone Service (AMPS) – *not* localized wireless monitoring systems. More specifically, the '347 patent involves a distributed approach to mobility processing. The '347 patent explains that mobility processing relates to various processing functions within global wireless telecommunications systems for managing the movement of subscribers (*e.g.*, cellphone users) as they move between sites (*e.g.*, cells supported by a cell tower).

Unlike the '491 patent (which involves solving maintenance, cost, and installation problems in a local and very simple polling-type monitoring system), the '347 patent involves solving the very complex problems associated with managing the movement of mobile subscribers between coverage areas in complicated global telecommunications networks. Clearly, one of ordinary skill in the art of local polling-type monitoring systems for manufacturing plants would not look for cost reduction solutions related to maintenance and installation in the complex field of multicast addressing schemes in mobile telecommunications systems. In fact, Appellant respectfully submits that such solutions are not disclosed at all in the '347 patent. Therefore, Appellant respectfully asserts that the '347 patent is improper "nonanalogous art" that may not be relied upon to support a rejection under §103. Accordingly, Appellant respectfully requests that the rejection be withdrawn and claims 27 – 29 be allowed.

Even though Appellant believes the §103 rejection is improper because the '347 patent is unavailable "nonanalogous art," Appellant further submits that the Examiner fails to establish a proper motivation or suggestion to modify the alleged teaching of the '491 patent with the alleged teaching of the '347 patent such as to render obvious claims 27 – 29.

Specifically, the Examiner argues that the '491 patent discloses all of the elements of independent claim 27 except for a wide area network and a predefined communication protocol, which the Examiner alleges are disclosed in the '347 patent. The Examiner further argues that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the '491 patent to include the alleged teachings of the '347 patent (wide area network and predefined communication protocol) because "connecting the system to a WAN and transmitting using a predefined protocol allows the skilled artisan to distribute processing which will increase scalability (see Shaughnessy *et al.*, column 2 lines 45 – 49)."

It is well-established law that, in order to properly combine select elements from differing prior art sources, there must be some teaching or suggestion *within the prior art* to make the combination specifically claimed by the Appellant's invention. *W. L. Gore & Associates, Inc. v. Garlock Thomas, Inc.*, 721 F.2d 1540, 1551 (Fed. Cir. 1983). More significantly,

"The consistent criteria for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this [invention] should be carried out and would have a reasonable likelihood of success, viewed in light of the prior art. ..." ***Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure...*** In determining whether such a suggestion can fairly be gleaned from the prior art, the full field of the invention must be considered; for the person of ordinary skill in the art is charged with knowledge of the entire body of technological literature, including that which might lead away from the claimed invention."

(Emphasis added) *In re Dow Chemical Company*, 837 F.2d 469, 473 (Fed. Cir. 1988).

It has often been noted that, "[h]umans must work with old elements, most if not all of which will normally be found somewhere in an examination of the prior art." *Connell v.*

Sears, Roebuck & Co., 722 F2d 1542, 1549, 220 U.S.P.Q. 193 (Fed. Cir. 1983). Furthermore, that features, even distinguishing features, are “disclosed” in the prior art is alone insufficient. As above indicated, it is common to find elements or features somewhere in the prior art. Moreover, most if not all elements perform their ordained and expected function. The test is whether the claimed invention as a whole, in light of all the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made. *Id.*

In this regard, Appellant notes that there must not only be a suggestion to combine the functional or operational aspects of the combined references, but that the Federal Circuit also requires the prior art to suggest **both** the combination of elements **and** the structure resulting from the combination. *Stiftung v. Renishaw PLC*, 945 Fed.2d 1173 (Fed. Cir. 1991). Therefore, in order to sustain an obviousness rejection based upon a combination of any two or more prior art references, the prior art must properly suggest the desirability of combining the particular elements.

Appellant respectfully submits that the purported motivation or suggestion provided by the Examiner is a classic example of impermissible hindsight reasoning based solely on Appellant’s disclosure. In fact, Appellant submits that the purported motivation (“to distribute processing which will increase scalability) quoted from the ‘347 patent is entirely inapplicable to the localized systems disclosed in the ‘491 patent for monitoring industrial machines within a manufacturing plant. In the ‘347 patent, the objective of distributing processing and increasing scalability is achieved by including a connectionless packet network 201 which supports multicast addressing between existing sites 203 – 208. WAN 230, LANs 231 – 232, and the corresponding wireless communication protocol function to facilitate communication between the various sites 203 – 208 in the telecommunications system 200. As mentioned above, the connectionless packet network 201 and the

corresponding mappings in sites 203 – 208 provide a distributed architecture to improve mobility management (*i.e.*, monitoring the movement of subscribers as they move between sites in the telecommunications system).

Appellant submits, however, that the '347 patent does not suggest the desirability of including the connectionless packet network 201 in a localized system for monitoring industrial machines in a manufacturing plant as disclosed in the '491 patent. In the '491 patent, a means for communicating between the existing components (command station 6 and machine monitors 4) is already provided by wireless repeaters 8. Appellant notes that an additional communication means, such as connectionless packet network 201, is not necessary.

Furthermore, Appellant submits that the '491 patent teaches away from using a WAN and corresponding wireless communication protocol. As mentioned above, the local system disclosed in the '491 patent is used to transmit physical characteristics of industrial machines from monitors 4 (inside a manufacturing plant) to command station 8 (also inside manufacturing plant) via repeaters 8. In other words, the system requires *local* transmission and not transmission over a *wide* area network. Therefore, Appellant respectfully submits that the Examiner establishes no motivation or suggestion to combine the '347 patent and the '491 patent such as to render obvious independent claim 27.

Furthermore, because independent claim 27 is believed to be allowable over the prior art of record, dependent claims 28 – 29 (which depend from independent claim 27) are allowable as a matter of law for at least the reason that they contain all features and elements of the corresponding independent claim. See, *e.g.*, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Appellant respectfully asserts that a *prima facie* case of obviousness has not been established and requests that the rejection of claims 27 – 29 be overturned.

2. **Combination of References Fails to Teach Each Limitation/Feature/Element of Claims 27 – 29**

Even assuming for the sake of argument that there is some proper suggestion or motivation to modify or combine the '491 patent and the '347 patent as the Examiner suggests, the combination of these references fails to disclose, teach, or suggest each and every element of independent claim 27. MPEP §2143.03.

The method of independent claim 27 involves “*monitoring and controlling a plurality of remote devices* via a host computer connected to a wide area network.” Unlike the method of independent claim 27, the localized systems taught in the '491 patent merely *monitor* physical characteristics, such as vibration or temperature, of industrial machines within a manufacturing plant. The '491 patent does not disclose, teach, or suggest the limitation of *controlling* the remote devices. Rather, the system merely responds to a polling request from the command station 6, senses the physical characteristic of the machine, and transmits the data to the command station 6.

The Examiner insists that the '491 patent teaches the feature of controlling the remote devices. As discussed throughout the Detailed Description of the present application (see FIG. 1), the wireless transceivers 135 are associated with sensors/actuators 130. The wireless communication network of independent claim 27 enables the actuators 130 to be controlled (*i.e.*, actuated). Appellant respectfully submits that the '491 patent does not teach, disclose, or suggest controlling the remote devices. Furthermore, the cellular networks taught in the '347 patent clearly do not disclose, teach, or suggest *controlling* the mobile phones.

The method of independent claim 27 *monitors and controls* the remote devices, which is not disclosed, taught, or suggested by the '491 patent and the '347 patent. Accordingly, and for at least this additional reason, Appellant respectfully submits that independent claim 27 patentably defines over the '491 and '347 patents and, therefore, the

rejection should be overturned. Furthermore, because independent claim 27 is believed to be allowable over the prior art of record, dependent claims 28 – 29 (which depend from independent claim 27) are allowable as a matter of law for at least the reason that they contain all features and elements of the corresponding independent claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Appellant respectfully asserts that a prima facie case of obviousness has not been established and requests that the rejection of claims 27 – 29 be overturned and the claims be allowed.

Claims 27 – 29 recite further limitations/features/elements that are not disclosed, taught, or suggested by the '491 patent and the '347 patent. The method of independent claim 27 recites “a plurality of transceivers having unique identifiers... ***further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message*** using the predefined communication protocol.” Unlike independent claim 27, the localized systems taught in the '491 patent contain machine monitors 4, inherently including a transmitter, that are merely capable of transmitting the original data message (col. 4, 41-50), but are not capable of transmitting a repeated data message. As shown in FIG. 1 of the present application, sensor/actuator 130, 140 is integrated with a transceiver 135 which is ***configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message***.

Looking to FIG. 1 of the '491 patent, the Examiner apparently associates the wireless transceivers of claims 27 – 29 with the machine monitors 4 of the '491 patent. As shown, the machine monitors 4a-4l are designed to relay data messages with either command station 6 or repeater 8a-8d, but not with other machine monitors. Only the repeaters 8a-8d of the '491 patent are designed to transmit a repeated data message. Notably, because repeaters 8a-8d are not associated with an individual machine monitor 4, the repeaters do not transmit a unique identifier. Furthermore, in the '491 patent, the transceivers associated with machine monitors

4a-4l merely transmit and receive to repeaters 8a-8d -- they do not transmit to other transceivers associated with the machine monitors. Thus, '491 patent does not disclose, teach, or suggest "a plurality of wireless transceivers having unique identifiers ... **further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message.**"

Furthermore, the cellular networks taught in the '347 patent clearly do not disclose, teach, or suggest "a plurality of wireless transceivers having unique identifiers ... **further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message.**"

The method of independent claim 27 recites a plurality of transceivers (each associated with a remote device being monitored and controlled (*e.g.*, sensor/actuator 130, 140). Each wireless transceiver is configured to **transmit a repeated data message**. In other words, each wireless transceiver associated with a remote device may receive and repeat data messages from other wireless transceivers associated with other remote devices. In this manner, the wireless communication system need not include as many repeaters because each transceiver associated with a remote device is configured to repeat data messages from other transceivers.

The Examiner insists that the '491 patent teaches wireless transceivers associated with the remote device (*i.e.*, machine monitors 4a-4l), in which the wireless transceivers are configured to repeat data messages from other wireless transceivers in the system. Appellant respectfully submits that the Examiner's characterization of the '491 patent is incorrect. Appellant carefully reviewed the portions of the '491 patent cited by the Examiner (as well as the remainder of the patent document). Appellant respectfully submits that the '491 patent merely discloses a repeater. The repeaters in the '491 patent function as a standalone repeater designed to extend the range of the existing transceivers associated with the machine

monitors. Appellant is not claiming that the '491 patent does not teach a repeater. In this regard, Appellant maintains that the Examiner has maintained the improper rejection without considering all of the claimed limitations/features/elements.

Appellant submits that the '491 patent does not teach, disclose, or suggest the limitation/feature/element of the wireless transceivers associated with the remote devices being configured to repeat data messages from wireless transceivers associated with other remote devices. As stated above, the integration of the repeat function within the wireless transceivers associated with the remote devices extends the communication range without the need for standalone repeaters. Despite the fact that the '491 patent does teach a standalone repeater, Appellant respectfully submits that the '491 patent does not disclose, teach, or suggest the relevant limitation/feature/element at issue -- the wireless transceivers associated with the remote device being configured to repeat data messages from wireless transceivers associated with other remote devices. For at least this additional reason, Appellant respectfully asserts that claims 27 – 29 patentably define over the '491 patent. Accordingly, Appellant respectfully requests that the rejection of claims 27 – 29 be overturned and the claims be allowed.


CONCLUSION

Appellant respectfully requests that the Board of Appeals overturn the Examiner's rejection of all pending claims 1 - 29 and allow claims 1 – 29 for the reasons indicated.

Respectfully submitted,

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**APPENDIX TO THE APPEAL BRIEF
UNDER 37 C.F.R. §1.192**

The Appendix is incorporated into the foregoing Appeal Brief under 37 C.F.R. §1.192.

THE CLAIMS

1. A wireless communication network adapted for use in an automated monitoring system for monitoring and controlling a plurality of remote devices via a host computer connected to a wide area network, the wireless communication network comprising:

a plurality of wireless transceivers having unique identifiers, each of the plurality of wireless transceivers configured to receive a sensor data signal from one of the plurality of remote devices and transmit an original data message using a predefined wireless communication protocol, the original data message comprising the corresponding unique identifier and sensor data signal, and further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message using the predefined communication protocol, the repeated data message including the sensor data signal and the corresponding unique identifier; and

a site controller in communication with at least one of the plurality of wireless transceivers, the site controller configured to receive the original data messages and the repeated data messages, identify the remote device associated with the corresponding sensor data signal, and provide information related to the sensor data signal to the wide area network for delivery to the host computer.

2. The wireless communication network of claim 1, further comprising a plurality of repeaters having unique identifiers, each of the plurality of repeaters in communication with at least one of the plurality of wireless transceivers and configured to receive the original data message transmitted by the at least one of the plurality of wireless transceivers and transmit a repeated data message using the predefined communication protocol, the repeated data message including the sensor data signal from the original data message and the unique identifier corresponding to the repeater.
3. The wireless communication network of claim 1, wherein the site controller is further configured to provide a command message to one of the plurality of wireless transceivers and each of the plurality of wireless transceivers are further configured to transmit, in response to the command message, the original data message, wherein the original data message corresponds to the command message.
4. The wireless communication network of claim 1, wherein the predefined communication protocol comprises a data packet comprising:
 - a receiver address identifying the receiver of the data packet;
 - a sender address identifying the sender of the data packet; and
 - a command indicator specifying a predefined command code.
5. The wireless communication network of claim 1, wherein the plurality of wireless transceivers are further configured to receive signals via Bluetooth technology.

6. The wireless communication network of claim 1, wherein the plurality of wireless transceivers are further configured to receive signals via IEEE standard 802.11(b).

7. The wireless communication network of claim 4, wherein the data packet further comprises:
 - a packet length indicator which indicates a total number of bytes in the current packet;
 - a total packet indicator which indicates the total number of packets in the current message;
 - a current packet indicator which identifies the current packet; and
 - a message number identifying the current message.

8. A wireless communication network adapted for use in an automated monitoring system for monitoring and controlling a plurality of remote devices via a host computer connected to a wide area network, the wireless communication network comprising:

a plurality of wireless communication means having unique identifiers, each of the plurality of wireless communication means configured to receive a sensor data signal from one of the plurality of remote devices and transmit an original data message using a predefined wireless communication protocol, the original data message comprising the corresponding unique identifier and sensor data signal, and further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message using the predefined communication protocol, the repeated data message including the sensor data signal and the corresponding unique identifier;

a means for receiving each of the original data messages and the repeated data messages;

a means for identifying, for each received message, the remote device associated with the corresponding sensor data signal; and

a means for providing information related to the sensor data signal to the wide area network for delivery to the host computer.

9. The wireless communication network of claim 8, further comprising a plurality of repeating means having unique identifiers, each of the plurality of repeating means in communication with at least one of the plurality of wireless communication means and comprising a means for receiving the original data message transmitted by the at least one of the plurality of wireless transceivers and a means for transmitting a repeated data message using the predefined communication protocol, the repeated data message including the sensor data signal from the original data message and the unique identifier corresponding to the repeater.

10. The wireless communication network of claim 8, further comprising a means for providing a command message to one of the plurality of wireless communication means, wherein each of the wireless communication means further comprise a means for transmitting, in response to the command message, the original data message, wherein the original data message corresponds to the command message.

11. The wireless communication network of claim 8, wherein the predefined communication protocol comprises a data packet comprising:

- a means for identifying the receiver of the data packet;
- a means for identifying the sender of the data packet; and
- a command means for specifying a predefined command code.

12. The wireless communication network of claim 11, wherein the data packet further comprises:

- a means for indicating a total number of bytes in the current packet;
- a means for indicating the total number of packets in the current message;
- a means for identifying the current packet; and
- a means for identifying the current message.

13. A wireless communication network for monitoring and controlling a plurality of remote devices via a host computer connected to a wide area network, the wireless communication network comprising:

a plurality of wireless transceivers having unique identifiers, each of the plurality of wireless transceivers configured to receive a sensor data signal from one of the plurality of remote devices and transmit an original data message using a predefined wireless communication protocol, the original data message comprising the corresponding unique identifier and sensor data signal, and further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message using the predefined communication protocol, the repeated data message including the sensor data signal and the corresponding unique identifier;

wherein at least one of the plurality of wireless transceivers is further configured to provide the original data messages and the repeated data messages to a site controller connected to the wide area network.

14. The wireless communication network of claim 13, further comprising a plurality of repeaters having unique identifiers, each of the plurality of repeaters in communication with at least one of the plurality of wireless transceivers and configured to receive the original data message transmitted by the at least one of the plurality of wireless transceivers and transmit a repeated data message using the predefined communication protocol, the repeated data message including the sensor data signal from the original data message and the unique identifier corresponding to the repeater.

15. The wireless communication network of claim 13, wherein the at least one of the plurality of wireless transceivers is further configured to receive a command message for one of the plurality of wireless transceivers from the site controller and transmit the command message to the one of the plurality of wireless transceivers.
16. The wireless communication network of claim 13, wherein the predefined communication protocol comprises a data packet comprising:
 - a receiver address identifying the receiver of the data packet;
 - a sender address identifying the sender of the data packet; and
 - a command indicator specifying a predefined command code.
17. The wireless communication network of claim 13, wherein the plurality of wireless transceivers are further configured to receive signals via Bluetooth technology.
18. The wireless communication network of claim 13, wherein the plurality of wireless transceivers are further configured to receive signals via IEEE standard 802.11(b).

19. The wireless communication network of claim 16, wherein the data packet further comprises:

a packet length indicator which indicates a total number of bytes in the current packet;

a total packet indicator which indicates the total number of packets in the current message; and

a current packet indicator which identifies the current packet; and

a message number identifying the current message.

20. (Original) A wireless communication network for monitoring and controlling a plurality of remote devices via a host computer connected to a wide area network, the wireless communication network comprising:

a plurality of wireless transceivers having unique identifiers, each of the plurality of wireless transceivers configured to receive a sensor data signal from one of the plurality of remote devices and transmit an original data message using a predefined wireless communication protocol, the original data message comprising the corresponding unique identifier and sensor data signal, and further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message using the predefined communication protocol, the repeated data message including the sensor data signal and the corresponding unique identifier;

wherein at least one of the plurality of wireless transceivers is further configured to provide the original data messages and the repeated data messages to a primary wireless communication network associated with an automated monitoring system.

21. The wireless communication network of claim 20, further comprising a plurality of repeaters having unique identifiers, each of the plurality of repeaters in communication with at least one of the plurality of wireless transceivers and configured to receive the original data message transmitted by the at least one of the plurality of wireless transceivers and transmit a repeated data message using the predefined communication protocol, the repeated data message including the sensor data signal from the original data message and the unique identifier corresponding to the repeater.

22. The wireless communication network of claim 20, wherein the at least one of the plurality of wireless transceivers is further configured to receive a command message for one of the plurality of wireless transceivers from the primary wireless communication network and transmit the command message to the one of the plurality of wireless transceivers.

23. The wireless communication network of claim 20, wherein the predefined communication protocol comprises a data packet comprising:

- a receiver address identifying the receiver of the data packet;
- a sender address identifying the sender of the data packet; and
- a command indicator specifying a predefined command code.

24. The wireless communication network of claim 20, wherein the plurality of wireless transceivers are further configured to receive signals via Bluetooth technology.

25. The wireless communication network of claim 20, wherein the plurality of wireless transceivers are further configured to receive signals via IEEE standard 802.11(b).

26. The wireless communication network of claim 23, wherein the data packet further comprises:

a packet length indicator which indicates a total number of bytes in the current packet;

a total packet indicator which indicates the total number of packets in the current message;

a current packet indicator which identifies the current packet; and

a message number identifying the current message.

27. A method for enabling customers to monitor remote devices via a wide area network (WAN), the method comprising the steps of:

establishing a wireless communication network that enables each of a plurality of customers to monitor at least one remote device via a wide area network, the wireless communication network comprising:

a plurality of wireless transceivers each integrated with one of the plurality of remote devices and having a unique identifier and configured to receive a sensor data signal from the remote device and transmit an original data message using a predefined wireless communication protocol, the original data message comprising the corresponding unique identifier for the originating wireless transceiver, each wireless transceiver further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data messaging using the predefined communication protocol, the repeated data message including the original sensor data signal and the corresponding unique identifiers for the originating wireless transceiver and the repeating wireless transceiver; and

a site controller in communication with at least one of the plurality of wireless transceivers, the site controller configured to receive the original data messages and the repeated data messages, identify the remote device associated with the corresponding sensor data signal, and provide information related to the sensor data signal to a WAN for delivery to a host computer; and

providing an organization access to the wireless communication network.

28. The method of claim 27, further comprising the step of receiving compensation for providing the organization access to the wireless communication network.

29. The method of claim 28, wherein the step of providing the organization access to the wireless communication network comprises enabling at least one remote device corresponding to a customer of the organization to communicate with the wireless communication network so that the remote device may be monitored via the WAN.